

Notice of Allowability

Application No.

10/645,667

Examiner

Vikansha S. Dwivedi

Applicant(s)

KOBA ET AL.

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/24/2006.
2. ☒ The allowed claim(s) is/are 1 and 4-10.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>NA</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

This Office action is in response to the amendments of 3/24/2006. Claims 1 and 4 are amended. Claim 2 and 3 has been cancelled. Rejections made in the Office Action of 12/29/2005 are hereby withdrawn in view of applicants' amendments.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Larry Nixon on 6/21/2006.

The application has been amended as follows:

Claims:

- **Cancel Claim 2**
- **Claim 1 (amended):** A fuel supply system installed inside a fuel tank to supply fuel out of the fuel tank, the fuel supply system comprising:
 - a cover, which is attached to the fuel tank;
 - a pump unit that includes an electric fuel pump, which pumps fuel;

and a connecting member, which connects between the cover and the pump unit in a manner that allows relative movement between the cover and the pump unit, wherein the pump unit further includes a supporting portion, which has:

a through hole that penetrates through the supporting portion and axially slidably receives the connecting member in a reciprocable manner; and

a plurality of grooves extending in an axial direction of the through hole and that are recessed in an inner peripheral surface of the supporting portion and, which [is] are slidably engageable with the connecting member.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance: The prior art neither discloses nor makes obvious the combination set forth in the claim 1 by not disclosing a fuel supply system wherein the supporting (portion supporting the connecting member that connects between the cover and pump unit allowing relative movement between the two) has a plurality of grooves that extend in an axial direction of the thru hole and are recessed in an inner peripheral surface of the supporting portion.

Nagata et al. (U.S. patent number 5,769,061) discloses a fuel pump to supply fuel that has circumferential and not axial grooves (sliding seal 39, as shown in Figure 1) recessed in the inner periphery of the supporting portion. The above amendment distinguishes over this reference.

Hazama (U.S. patent number 6,604,511) discloses a fuel supply apparatus and Figure 3 and Figure 4 show the axial grooves in the inner periphery of the supporting portion but it is not slidably engageable with the connecting member (30), nor would it be obvious to do so because it teaches away from reducing the structural integrity of the supporting portion 12 (see Column 4 lines 41-50).

Tuckey (U. S. patent number 4,807,582) discloses a fuel system for an internal combustion engine with a reserve fuel shut off valve. Figure 3 of Tuckey show a valve with axial grooves in the inner periphery (shown beside internal ribs 84), which is slidably engageable with a connecting member. It would not be obvious to use the teachings of Tuckey to modify the prior art, as its purpose is completely different, that is to ensure fuel flow when the valve is open. One of ordinary skill in the art would not be motivated to incorporate these grooves in the prior art of record.

As discussed above, the relevant prior art of record discloses the various components of the present invention but fails to provide teaching for putting them together. Neither Tuckey nor Hazama or Nagata et al. individually or in combination make it obvious to have a plurality of grooves that extend in an axial direction of the thru hole and are recessed in an inner peripheral surface of the supporting portion to slideably engage with connecting member.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Remarks

Claims 1 and 4-10 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vikansha S. Dwivedi whose telephone number is 571-272-7834. The examiner can normally be reached on M-F, 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe can be reached on 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

VSD


TAE JUN KIM
PRIMARY EXAMINER